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ABSTRACT

Staff in a Kansas school district developed a survey consisting of a comprehensive set of technology integration indicators to provide data to be used in planning group and individual professional development related to the use of educational technology. Surveyed teachers rated themselves on "where I am now" and "where I would like to be." After a pilot test, the revised survey was distributed to the district's teaching staff. Over 75% of the teaching staff responded at the first administration, and at the second administration 1,215 teachers completed the survey (90% response rate). Factor and reliability analyses indicated that the survey was a high-quality instrument that provided information that can be used to design relevant group and individual professional development and to monitor the development of teachers' technology integration skills. The survey is attached as Appendix A. Appendix B contains three tables of weighted scale scores. (SLD)

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ED 452 259

Assessing Teacher Technology Skills

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Assessing Teacher Technology Skills

Purpose

In less than a decade the Blue Valley School District has invested close to $40 million in technology improvements. With this expenditure of nearly $2400 per student, the school board and district administration wanted to enhance teachers' technology skills and to provide a system to monitor continuous improvement in technology use.

Perspective

A great deal of literature has expressed concern about teachers' lack of the skills needed to effectively integrate technology into the curriculum. For example, a recent survey by Market Data Retrieval (1999) found that 61 percent of teachers felt either "not at all prepared" or only "somewhat prepared" to integrate technology into classroom instruction. Further, the survey indicated that teachers with 11 or more hours of technology training were far more likely to use technology in the classroom than were teachers who received less training.

Also supporting the importance of professional development to improve teachers' skills in the use of technology is research conducted in the Fairfax County Schools. White (1996) reported that students may have increased the frequency or effectiveness of their use of technology as a result of teacher training or in-class modeling by a specialist. In a recent journal article Becker (2000) also noted that "How likely students are to experience computers in intellectually powerful ways depends greatly on their teacher's expertise with computers" (p. 54).

A report by the CEO Forum (2000) underscored the link between professional development and effective use of technology in the nation's classrooms when it stated:

> Well-trained teachers are the key to creating digital learning environments. Schools and districts must continue to make the commitment to professional development by providing the necessary support, resources and time for teachers to learn both how to use technology and, more importantly, how to integrate digital content and tools into the curriculum and instruction" (p. 27).

The authors would like to express their appreciation to Dr. Judy Phannensteil, president, and the staff of Research and Training Associates, Inc., Overland Park, KS for their assistance in the data analysis and reporting for this research.

Outgoing Secretary of Education Riley and his colleagues echoed this concern when they stated:

> Ensuring that the nation has effective 21st-century teachers requires more than just providing sufficient access to technology for teaching and learning. We should also improve the preparation of new teachers, including their knowledge of how to use technology for effective teaching and learning; increase the quantity, quality and coherence of technology-focused activities aimed at the professional development of teachers...(Riley, Holleman & Roberts, 2000, p. 6).

Too often the use of computer technology has raised equity concerns. Chen (2000) believes that training can also play a role here when he notes: "Another factor often cited as important to increasing equity is improved and widespread training for teachers ... "(p. 170).

As indicated by this review, teachers' lack of technology skills and sparse professional development designed to improve these skills are major impediments to effective integration of technology into the classroom. As educators seek to provide professional development to address this problem, they must be sure that the professional development is focused on the skills that teachers need. To do otherwise will waste precious resources and will risk teachers developing negative attitudes toward technology and professional development.

To address this concern staff in the Blue Valley School District developed a survey to provide data that can be used to plan group and individual professional development that is targeted toward perceived needs. Since the plan is to administer the survey on multiple occasions, the results will also assist the district to monitor the effects of its technology professional development efforts.

Method

The group planning the survey set out to identify and measure a comprehensive set of effective technology integration practices. A first step was to study the "Recommended Foundations in Technology for All Teachers" which was developed by the International Society for Technology in Education. As the group studied and discussed these standards, they realized that the survey data would have the greatest potential if it were linked to the district's teacher appraisal system. Therefore, a comprehensive set of technology integration indicators was developed to address the four categories in the appraisal system: "curriculum and instruction," "classroom management," "communication," and "professional development."

To further insure the utility of the survey data, it was decided to have teachers use the same five-point rubric that the State of Kansas requires for reporting progress toward results-based staff development goals. The five-points in this system are: "non-use," "awareness," "demonstration," "integration," and "transfer." Customized, specific definitions for each of these five categories were provided for the four sections in the survey. See Appendix A for a complete copy of the survey instrument. Teachers were

also able to select the response "not applicable" as necessary. Using this rubric for each of the 43 technology integration competencies, teachers rated themselves once on "where I am now" and once on "where I'd like to be." Having both sets of ratings allowed administrators to gauge teachers' willingness to work toward improving their skills.

After the survey instrument was developed, it was piloted with a group representing about 4 percent of the district teaching force. This pilot confirmed that the survey items were understandable and the completion of the survey would take no longer than 20 minutes per respondent.

At the close of the 1998-99 school year, each district teacher was to complete the survey. While responses were not received from 100 percent of teachers, with over 75 percent of the district teaching staff participating, the results are highly representative.

The results indicated that the most widely integrated technology tool for curriculum and instruction—and the only tool that had largely reached the integration and transfer stages of implementation—was word processing. About 80% of elementary teachers, 85% of middle school teachers and 88% of high school teachers reported high levels of word processing integration. Technology applications were also examined to determine the extent to which they could be considered as "entrenched" in the daily life of the classroom. In addition to word processing the major areas of entrenched use were found to be: World Wide Web; electronic encyclopedias; web search strategies; and presentation software.

While most teachers perceived the relevance of nearly all technological applications to their teaching and learning, a sizable proportion reported non-use in several areas. Chief among these were: on-line databases (especially at elementary and middle); URLs and links; hypermedia and web pages; graphics tools; and simulation software. The data also revealed that middle school teachers reported non-use for more technology application areas than did elementary and high school teachers.

To facilitate comparisons among schools and levels, all items were subjected to a principal components factor analysis with varimax rotation. This analysis yielded six strong factor scales: presentation and communication applications, information resources, classroom management, communication, local professional growth opportunities and other professional growth opportunities. Reliability coefficients ranged from .70 to .93.

Table 1 shows the scale score for each factor by school level. Scale scores have been standardized to a mean of 100 and a standard deviation of 15.

Considering effect size research as guidance, "meaningful differences" should be in the magnitude of 0.25 to 0.33 standard deviation units. For these scale scores with a standard deviation of 15, that would be 3.75 to 5. Using this guideline, the data indicated that none of the differences between the "where we are" and the "where we

would like to be" scores signified a meaningful discrepancy. Further examination of the scale scores indicated that where teachers reported they were in terms of technology integration varied more within school type than across school types.

Table 1

Factor Scores by Level

	Elementary		Middle		High School	
	Where We Are	Where We'd Like To Be	Where We Are	Where We'd Like To Be	Where We Are	Where We'd Like To Be
Presentation & Communication	102	101	98	100	99	99
Information Resources	98	100	100	100	102	100
Classroom Management	99	99	100	101	101	100
Communication	102	102	100	100	97	97
Professional Growth-Local	98	99	102	102	100	100
Professional Growth-Other	98	98	100	101	103	101

Considering the "where we are" ratings across levels indicates that elementary teachers rated themselves higher on "presentation and communication" than middle school teachers and higher than high school teachers on "communication." High school teachers rated themselves higher than elementary teachers on "information resources" and both "professional growth" scales. Middle school teachers also rated themselves higher than elementary teachers on "professional growth-local."

Teacher respondents were also asked to list "The top two or three skills I would most like to develop to help me to make effective use of technology in teaching ...." These were to be ranked from most important to least important. Two areas stood out with two or more times as many first priority rankings as compared to the other areas listed. These were "presentation/publishing/student portfolio" and "internet/local area network."

The Kansas Department of Education provides partial reimbursement of staff development expenses. As part of the implementation plan in the Blue Valley School District, some of these funds are allocated to each building. The funds may be used to bring a consultant in to conduct a workshop, to pay registration and/or travel for a teacher to attend a workshop, to pay a substitute so that a teacher might attend a workshop or observe another teacher and so on. For a teacher to access these "state staff development funds," the activity must relate to a goal in the teacher's Individual Development Plan (IDP).

To assist schools and individual teachers in considering technology staff development needs as they develop their overall staff development plan and/or their IDPs, each school received extensive reports of results from the Technology Integration Self-Assessment. Appendix B contains sample reports from a single elementary school.

The graph on page B-1 provides a global view of the school staff's responses grouped into the six factors. As a point of reference, the graph also shows the combined responses for all district schools at the same level. Table 4 on page B-2 shows how the teachers at that school responded to the individual survey items. This sample shows responses for 10 of the 43 survey items. Table 5 on page B-3 provides the school with a summary of the staff's perceived strengths and weaknesses. The strengths and weaknesses were determined by comparing the school mean for each item to the district mean for each item for that level. Items were identified as a strength or weakness if the mean for the school was more than one-third of a standard deviation above or below the district mean.

The survey also asked teachers to write responses to three questions: (1) "The top two or three skills I would most like to develop to help me to make effective use of technology in teaching are:," (2) "Three specific activities, resources or services that would help me improve [my] technology skills are:," and "I believe the following person(s) would be excellent technology mentors or trainers for other teachers (you may self-nominate):." Sample reports for the first two of these questions are shown on pages B-4 to B-6.

Conclusions and Educational Significance

The factor and reliability analyses reported in this study indicate that the "Technology Integration Self-Assessment" is a high quality survey instrument that provides schools and/or districts with information that can be used to design relevant group and individual professional development, and to monitor the development of teachers' technology integration skills.

The second administration of the survey has just been completed. This year the survey was web-based with each teacher going to the survey web-page and completing the survey on-line. Twelve hundred, fifteen teachers completed the survey. This represents approximately 90% of the teachers in the district. This is substantially higher than the percentage responding to the first administration. Data analysis is beginning with results to be available to schools before school dismisses for the summer. This will allow the results to help determine the school's staff development activities for the coming school year.

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APPENDIX A

Blue Valley Schools
Technology Integration Self-Assessment

Overview: This confidential self-assessment will be used to assist the district and schools in planning for staff development and technology support needs. Individual results are anonymous – they will **NOT** be shared with administrators. Each section of the assessment begins with a brief description of the topics being addressed and a self-assessment rubric matched to the PDC rating scales. Use the directions below to assist you in completing the survey. **A pilot group completing the survey took an average of 20 minutes to complete (from 14-25 minutes).**

Now, Follow These Steps

- **Read Carefully:** Make sure to read the explanation of the rating scale for each part of the assessment – the ratings vary from section to section!

- **Think About Your Use:** For each numbered item, decide what your current level of knowledge and use is AND the level of knowledge or use you would like to achieve.

- **Respond Candidly:** Since this is a confidential self-evaluation, your honest responses will be of most value to you in planning for professional growth and to the district in planning for staff development opportunities.

- **Mark Responses Carefully:** For each item, check ONE response under "Where I am now:" AND check one response under "Where I'd like to be:"

- **Provide Written Feedback:** Respond briefly to the open-ended questions on the insert page (use the spaces provided).

- **Indicate School, Subject:** Without school, we can't help buildings and without subject code (high school), we can't help departments plan staff development!

- **Return Promptly:** Responses are needed from each and every *professional employee* in your school. Return it to the person assigned to collect these in your building ASAP.

- **Read the Back:** See the back page of this document for more details about the purpose and creation of this assessment

Thanks for your help as we plan for needed staff development and support of technology integration!

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School (print entire school name)_____

Subject – for High School (circle only one) **Communication Arts** **Foreign Language** **Math** **Science** **Social Studies** **Other**

CHECK ONE CIRCLE under "Where I am now" and CHECK ONE CIRCLE under "Where I'd like to be" for each numbered statement in the survey (see sample item below). You may use pen or pencil – make a copy for your files and turn in this original to the designated person in your building

PART I – CURRICULUM AND INSTRUCTION asks staff members to assess their use of technology as a teaching or learning tool and their inclusion of curricular technology in their lessons. Here is the scale for self-assessment in the curriculum and instruction portion of the survey:

Non-use	I have no knowledge/limited knowledge of the curricular or teaching/learning applications of this technology.
Awareness	I can explain or describe how this technology can be used as an instructional resource and/or in curricular activities.
Demonstration	I must make a conscious effort to consider use of this technology as a part of lesson planning and/or as a teaching and learning tool and I experiment with its use.
Integration	I naturally consider the use of this technology as a part of lesson planning and make appropriate use of it in curricular applications and/or as a teaching and learning tool.
Transfer	I encourage colleagues to use this technology through one or more of these activities: modeling lessons, mentoring, collaborative planning, giving workshops, etc.
Not Applicable	I do not believe this technology has application for the curriculum area(s) I teach and is not relevant as a teaching or learning tool.

CURRICULUM AND INSTRUCTION	Where I am now : N	A	D	I	T	na	Where I'd like to be: N	A	D	I	T	na
Sample: Paper and pencil for writing editable memos.	O	O	O	O	O	O	O	O	O	O	O	O
1. Presentation software to create and deliver lessons and for student reports.	O	O	O	O	O	O	O	O	O	O	O	O
2. Word processors to create written documents.	O	O	O	O	O	O	O	O	O	O	O	O
3. Desktop Publishing software to produce newsletters or other specially formatted documents.	O	O	O	O	O	O	O	O	O	O	O	O
4. Hypermedia (Hyperstudio, web pages, etc.) to organize and link elements of a presentation.	O	O	O	O	O	O	O	O	O	O	O	O
5. Database software to organize and analyze data.	O	O	O	O	O	O	O	O	O	O	O	O

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CURRICULUM AND INSTRUCTION	Where I am now : N	A	D	I	T	na	Where I'd like to be: N	A	D	I	T	na
6. Spreadsheet software to organize, display, and analyze numeric data.	O	O	O	O	O	O	O	O	O	O	O	O
7. Drill and practice software to build students' skills.	O	O	O	O	O	O	O	O	O	O	O	O
8. Simulation software, modeling software, and interactive instructional software to enhance student learning and analysis of curriculum-related problem situations.	O	O	O	O	O	O	O	O	O	O	O	O
9. Graphics tools (one or more of the following: scanners, digital cameras, downloaded images) and software to acquire, edit, and incorporate images into documents.	O	O	O	O	O	O	O	O	O	O	O	O
10. Online instructional tools and simulations to provide curriculum-related learning experiences.	O	O	O	O	O	O	O	O	O	O	O	O
11. E-mail linking students with peers or experts to share or acquire curriculum-related information or skills.	O	O	O	O	O	O	O	O	O	O	O	O
12. World wide web resources for teachers.	O	O	O	O	O	O	O	O	O	O	O	O
13. Ability to access to URLs and navigate through pre-organized links	O	O	O	O	O	O	O	O	O	O	O	O
14. Teacher-made web based advance organizers (e.g., "favorites" lists, and bookmarks) to support instruction.	O	O	O	O	O	O	O	O	O	O	O	O
15. Efficient search strategies to locate useful curricular/instructional resources on the Internet.	O	O	O	O	O	O	O	O	O	O	O	O
16. Electronic encyclopedias, atlases, and other CD-ROM reference materials.	O	O	O	O	O	O	O	O	O	O	O	O
17. Online databases (e.g. EBSCO, ProQuest, NewsBank, SIRS, CQ Researcher, First Search)	O	O	O	O	O	O	O	O	O	O	O	O
18. Library automation system to access print and non-print district-owned resources.	O	O	O	O	O	O	O	O	O	O	O	O
19. Calculators to perform curriculum-related computation, graphing, or statistical functions.	O	O	O	O	O	O	O	O	O	O	O	O
20. Calculator/computer-based laboratory instruments to collect and analyze experimental data.	O	O	O	O	O	O	O	O	O	O	O	O
21. District-taped instructional television resources.	O	O	O	O	O	O	O	O	O	O	O	O

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PART II – CLASSROOM MANAGEMENT. Please assess your knowledge of and adherence to District policies, copyright laws, and ethical standards with regard to technology use. Legal issues, student safety, and academic integrity are covered in this part of the survey. Here is the scale for self-assessment in the classroom management portion of the survey:

Non-use	I have limited or no knowledge of the issue, policy, or practice described.
Awareness	I am familiar with and can identify key points related to the issue, policy, or practice described.
Demonstration	I must make a conscious effort to teach, model, and enforce adherence to the policy or practice described.
Integration	I automatically teach, model, and enforce adherence to these policies or practices.
Transfer	I encourage colleagues to teach, model, and enforce these practices or policies

CLASSROOM MANAGEMENT	Where I am now : N A D I T	Where I'd like to be: N A D I T
1. Proper care of computer equipment, peripherals, and other technology	O O O O O	O O O O O
2. District Acceptable Use Policies for Communications Technologies	O O O O O	O O O O O
3. Copyright laws and Fair Use guidelines.	O O O O O	O O O O O
4. Issues regarding student safety and sharing of personal information in the media or on the Internet.	O O O O O	O O O O O
5. Plagiarism and providing appropriate citations for the work and ideas of others.	O O O O O	O O O O O
6. Accessing inappropriate materials.	O O O O O	O O O O O
7. Monitoring students access to online resources and compliance with laws and policies	O O O O O	O O O O O

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PART III – COMMUNICATION. Please assess your knowledge and use of the communications media. Here is the scale for self-assessment in the communication portion of the survey:

Non-use	I am unaware of this technology or its usefulness as a communication tool.
Awareness	I am aware that this communication tool is available and I have some knowledge of its possible usefulness.
Demonstration	I occasionally or irregularly make use of this communication tool.
Integration	I routinely make appropriate use of this communication tool.
Transfer	I encourage and support colleagues in their use of this communication tool.
Not Applicable	I do not believe this tool has application for me as a means of external or internal communication.

COMMUNICATION	Where I am now : N	A	D	I	T	na	Where I'd like to be: N	A	D	I	T	na
1. Voicemail	O	O	O	O	O	O	O	O	O	O	O	O
2. Telephone for contact with parents.	O	O	O	O	O	O	O	O	O	O	O	O
3. Personal web page with information for students and/or parents.	O	O	O	O	O	O	O	O	O	O	O	O
4. Word processor or desktop publishing software for parent memos and newsletters.	O	O	O	O	O	O	O	O	O	O	O	O
5. Presentation software for events such as "Meet the Teacher" night.	O	O	O	O	O	O	O	O	O	O	O	O

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PART IV – PROFESSIONAL GROWTH AND LEADERSHIP. Please assess the extent to which you are growing as a professional and demonstrating leadership in your building or in the district with regard to technology. Here is the scale for self-assessment in the professional growth and leadership portion of the survey:

Non-use	I am not familiar with what technology skills or knowledge might be available through this resource.
Awareness	I am aware of the availability of this resource for gaining new technology skills or knowledge.
Demonstration	I occasionally use this resource to acquire new technology skills or knowledge.
Integration	I routinely use this resource to acquire new technology skills or knowledge and apply it in my work.
Transfer	I share information and encourage colleagues to grow professionally via this resource.
Not Applicable	I do not believe this resource provides a means for increasing technology skills or knowledge.

PROFESSIONAL GROWTH AND LEADERSHIP	Where I am now : N	A	D	I	T	na	Where I'd like to be: N	A	D	I	T	na
1. District-sponsored professional development courses.	O	O	O	O	O	O	O	O	O	O	O	O
2. District-sponsored workshops.	O	O	O	O	O	O	O	O	O	O	O	O
3. Courses or workshops offered outside the District.	O	O	O	O	O	O	O	O	O	O	O	O
4. Regional or national conferences related to curricular subject(s).	O	O	O	O	O	O	O	O	O	O	O	O
5. Regional or national conferences related to technology in education.	O	O	O	O	O	O	O	O	O	O	O	O
6. Professional journals related to curricular subject(s).	O	O	O	O	O	O	O	O	O	O	O	O
7. Professional journals related to technology in education.	O	O	O	O	O	O	O	O	O	O	O	O
8. Personal experimentation with and investigation of new technologies.	O	O	O	O	O	O	O	O	O	O	O	O
9. Research studies and/or action research projects on integration of technology.	O	O	O	O	O	O	O	O	O	O	O	O
10. Research studies and/or action research on best practices in the use of instructional or curriculum-related technology.	O	O	O	O	O	O	O	O	O	O	O	O

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A few details about the Technology Integration Self-Assessment

This survey is designed to assist the Blue Valley District in planning staff development for its employees. The survey should provide each employee with an anonymous self-assessment of how he/she compares with other employees in his/her building and in the district as a whole. Employees should use their profile to make informed decisions about staff development/professional growth goals. Building and district results will be presented to each school for its technology and staff development planning.

Processing: Completed surveys will be tabulated by an independent firm to ensure anonymity.

Content: This assessment is based on the skills and competencies identified in the *Professional Employee Appraisal System* booklet. Descriptors utilized in constructing the survey are as follows:

- *The professional employee incorporates use of appropriate technology within content/curricular area.*
- *The professional employee accesses instructional resources available via technology (e.g., Internet, library automation system, instructional television).*
- *The professional employee ensures that technology and classroom equipment are used safely and appropriately.*
- *The professional employee utilizes available communication media (e.g., telephone, voice mail, e-mail) and writes and speaks clearly, correctly and effectively.*
- *Demonstrates expanding skills in the area of technology.*

Rating scales: The rating scales for the survey are taken from the *Professional Development Handbook*'s Professional Development Validation Guidelines. That 5-point scale includes: Nonuse, Awareness, Demonstration, Integration, and Transfer. By using the Professional Development Council's (PDC) rating scale, employees and schools should be able to choose staff development matched to their ability levels.

Format of the Self-Assessment: The survey is broken into five sections. Curriculum and instruction (the first two bullets in the content section above) are combined since they are integrated issues. Classroom management, communication, and professional growth and leadership constitute the next three sections. The final section is for open-ended responses.

Acknowledgements: We wish to acknowledge and thank members of the Board of Education Technology Integration Advisory Committee for providing valuable input in the development of this assessment. We also want to thank the staff development office (Human Resources) and the Blue Valley NEA for ideas and support during developmental stages of the project. And a big thanks to those district teachers who participated in the pilot studies. We couldn't have done it without you.
Bob Moore, Blake West & Carol Bartolac (Information & Technology)

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Part V - Open-Ended Responses

Please respond briefly to the each of the following open-ended items. Use the space provided below each item for your response. Write legibly and make sure to RETURN THIS PAGE along with the multiple-choice portion of the assessment to the designated person in your building!

A. The top two or three skills I would most like to develop to help me to make effective use of technology in teaching are:
(1 = most important to 3 = least important)

1.

2.

3.

B. Three specific activities, resources or services that would help me improve technology skills are:
(1 = most important to 3 = least important - give details how each would be used to assist your growth – e.g. "I would use 30 minutes a week to _____ in order to _____).

1.

2.

3.

C. I believe the following person(s) would be excellent technology mentors or trainers for other teachers (you may self-nominate).

D. Additional comments:

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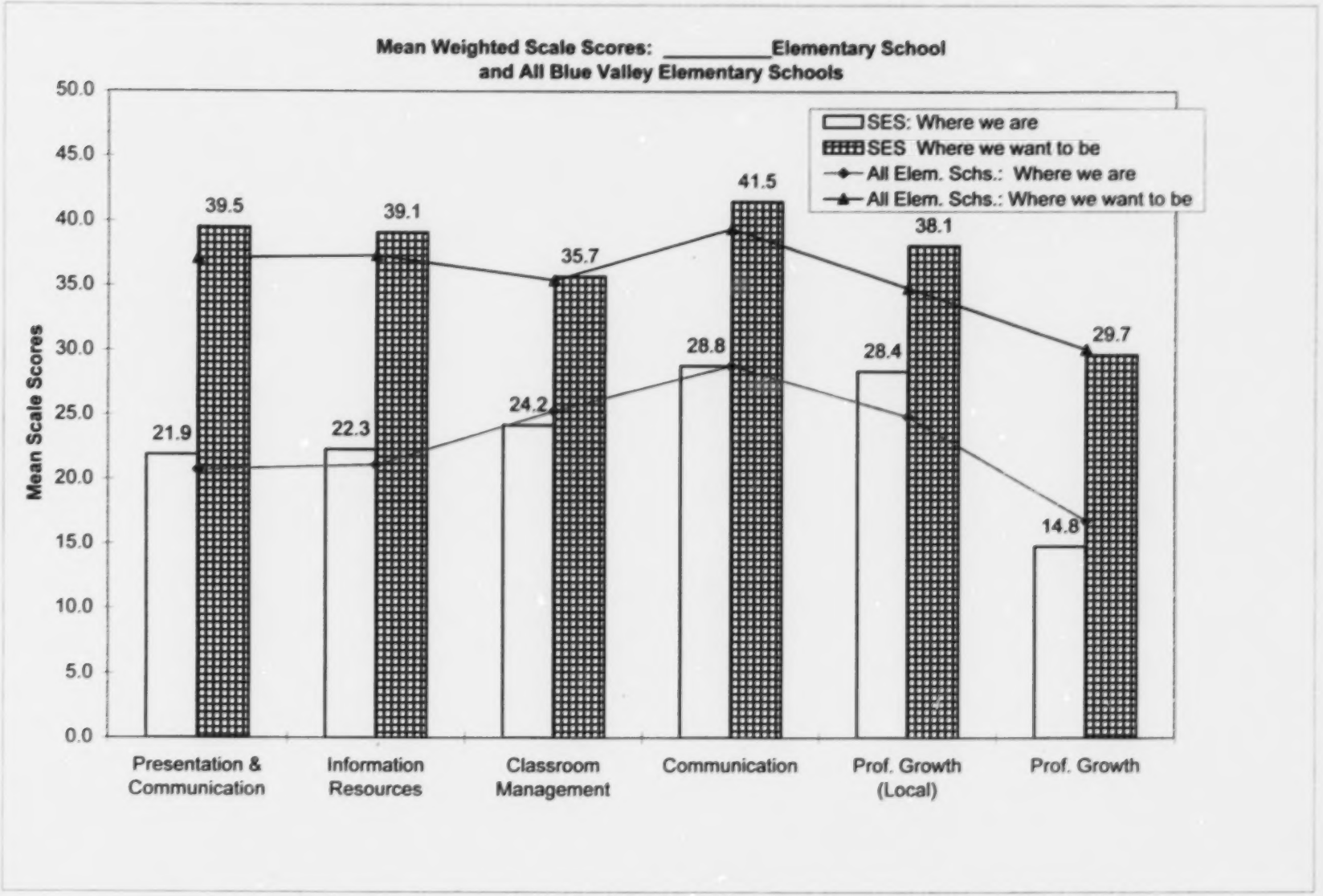
APPENDIX B



B-1

Table 4. Professional Growth and Leadership
School: Elementary

	# of Teachers	Where I am now							Where I'd like to be		Overall Blue Valley Elementary Schools		
		% N (0)	% A (1)	% D (2)	% I (3)	% T (4)	% NA	Mean of 5 Categories	Mean	Mean Difference	"I am" Mean	"I'd like to be" Mean	Mean Difference
1. District-sponsored professional development courses.	23	0	17	52	13	17	0	2.3	3.1	0.9	2.2	2.9	0.8
2. District-sponsored workshops.	23	0	30	35	13	22	0	2.3	3.1	1.0	2.1	2.9	0.8
3. Courses or workshops offered outside the District.	23	0	35	26	17	22	0	2.3	2.9	0.7	1.6	2.5	0.9
4. Regional or national conferences related to curricular subject(s).	22	27	45	9	5	5	9	1.0	2.3	1.2	1.5	2.5	1.0
5. Regional or national conferences related to technology in education.	23	39	43	13	0	0	4	0.7	2.1	1.4	0.9	2.2	1.2
6. Professional journals related to curricular subjects(s).	23	17	22	26	9	22	4	2.0	3.1	1.1	1.9	2.7	0.8
7. Professional journals related to technology in education.	23	17	52	22	4	0	4	1.1	2.6	1.4	1.1	2.2	1.1
8. Personal experimentation with and investigation of new technologies.	23	17	30	26	22	4	0	1.7	3.0	1.3	1.7	2.8	1.1
9. Research studies and/or action research projects on integration of technology.	23	35	39	17	4	4	0	1.0	2.1	1.0	0.9	2.0	1.1
10. Research studies and/or action research on best practices in the use of instructional or curriculum-related technology.	23	39	35	17	0	4	4	0.9	2.2	1.2	0.9	2.2	1.2

B-2

Table 5. Questionnaire Items for Which School Responses Varied More Than 1/3 Standard Deviation Above or Below the Overall Mean

School: Elementary

Questionnaire Item	School mean of less than 1/3 Std. Dev. below the overall mean	School mean of more than 1/3 Std. Dev. above the overall mean
I.3. Desktop Publishing software to produce newletters or other specially formatted documents.		✓
I.9. Graphics tools (one or more of the following: scanners, digital cameras, downloaded images) and software to acquire, edit, and incorporate images into documents.		✓
I.17. Online databases (e.g., EBSCO, ProQuest, NewsBank, SIRS, CQ Researcher, First Search).	✓	
II.6. Accessing inappropriate materials.	✓	
III.4. Word processor or desktop publishing software for parent memos and newletters.		✓
IV.3. Courses or workshops offered outside the District.		✓
IV.4. Regional or national conferences related to curricular subject(s).	✓	
IV.5. Regional or national conferences related to technology in education.	✓	

Blue Valley Schools--Technology Integration Self-Assessment
Top activities, resources, or services that would help teachers improve technology skills

---------- SCHOOLNAME= ELEMENTARY ----------

Most important

DO documents on the Internet more easily accessed
Introduce to new software
Share ideas monthly on how others use tech.
on-site training
Learning my way around the Internet
Time to experiment and paractice
Ongoing inservice provided integrated software
mentor:1on1 with qualified person
Help from hired people to show how to use tech.
More direct instruction for children
Book w/ good web sites
Inservice to learn new software
Spreadsheet
Staff Development at individual schools
Class on web pages
Graphics tools
browse software that could be used in class
Digital Camera
Time to share with my peers

Second most important

Playtime with programs
Tech specialist in building
available full time resource person in building
More instruction in learning about the Dell comps.
If enough time, search for good internet sites
building tech supervisors to be called for assist.
Easy programs
review of classes already taken
Training on PowerPoint/digital cameras
A full-time computer facilitator in each building
Outside the district workshops, seminars, classes
Class on PowerPoint
Spreadsheet Software
time to develop powerpoint presentations with clas
Video camera
An aide for technology-someone to answer questions

Third most important

Ideas to use in challenge
District workshops
internet
10 mins. A day to correspond through e-mail
In-building workshops
more time to experiment
Time to experiment with online databases
Professional journals related to curriculum
Practice time to become more comfortable with win9

Blue Valley Schools--Technology Integration Self-Assessment
Top skills that teachers would most like to develop to help them make effective use of technology

---------- SCHOOLNAME= ELEMENTARY ----------

Most important skill

I'd like to be able to use the word processor more
Learn new IBM type computer
HyperStudio/PowerPoint
Internet
Programs w/ students (powerpoint, etc.)
Internet Resources for teachers
Internet - Become more familiar
Use of digital camera
Word processing
How to fix the computers when they go down
Short presentations, messages to parents
Helping children develop skills, learn concepts
accessing programs
Ways to use Internet in classroom
Using HyperStudio for student presentations
Presentation software for lessons
Creating Web Pages
Building a useful web page
C + I = HyperMedia + Graphics Tools
Use of Internet on curricular research
Integration of internet

Second most important skill

Have new software
Utilizing the Internet in the classroom w/ student
Software
variety of programs avail. To lessen daily work
Personal web page
E-mail
Internet skills
PowerPoint
How to use a new system in the classroom w/ tv
Newsletters, presentations, message to parents
Develpo desktop publishing skills
displaying for whole class lessons
PowerPoint presentations
Make use of PowerPoint
Drill + practice software
Troubleshooting
Presentation software, digital camera
Online Instructional tools + simulations
PowerPoint - for parent/student presentations
Use of digital cameras and scanners in lessons

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Blue Valley Schools--Technology Integration Self-Assessment
Top skills that teachers would most like to develop to help them make effective use of technology

---------- SCHOOLNAME= ELEMENTARY ----------

Third most important skill

More computers in my room
Choosing appropriate educational software
HyperStudio
E-mail access
Develop specific lessons
Better skills with database, record keeping
repair skills
Digital camera use
Making better use of Internet for learning
Spreadsheet software for student grades
HyperStudio
incorporate online databases into lessons
Communication (Presentation Software)
A way to do these surveys online
Use of technology in my lessons